

APPENDIX B

P. 1/3

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```
//GLIDE EXAMPLE of dual rendering
//Glide openly allows access to 2 cards by calling grSstSelect(0), or 1
//Glide also doesn't have to worry about "exclusive mode" which only allows 1 full screen DirectX window.
// So no special code for window creation is necessary.
// Due to differences in the API's, the data at this point has already been transformed from 3D into
// 2D data.
// As a result, less accurate method of creating stereo image is applied.
// This stereo method moves the geometry (in 2D), rather than the correct method of moving the camera.
// Assembly was used to bypass the C/C++ const barrier. In assembly, it is not "read only"
// const means "read only" "you can't modify it legally"
// In assembly language, the "read only" lock is not checked.
// This allows us to move the const geometry.
// The assembly simply adds, or subtracts an offset, based on the geometry's distance from camera.

FX_ENTRY void FX_CALL PgrDrawTriangle(const GrVertex *a,
                                       const GrVertex *b,
                                       const GrVertex *c, float angle, float limit)
{
    float dista = (a->oow) * angle;
    if (abs((int)dista) >= abs((int)limit))
        dista = limit;
    float distb = (b->oow) * angle;
    if (abs((int)distb) >= abs((int)limit))
        distb = limit;
    float distc = (c->oow) * angle;
    if (abs((int)distc) >= abs((int)limit))
        distc = limit;

    float temporaire = 0.0f;
    // On commence par soustraire le decalage

    asm
    {
        // Premier point
        pushad
        push ds
        mov esi, a
        mov eax, [esi]
        mov temporaire, eax
        fld temporaire
        fsub dista
        fstp temporaire
        mov eax, temporaire
        mov [esi], eax
        // Deuxieme point
        mov esi, b
        mov eax, [esi]
        mov temporaire, eax
        fld temporaire
        fsub distb
        fstp temporaire
        mov eax, temporaire
        mov [esi], eax
        // Troisieme point
        mov esi, c
        mov eax, [esi]
        mov temporaire, eax
        fld temporaire
        fsub distc
        fstp temporaire
        mov eax, temporaire
        mov [esi], eax
        pop ds
        popad
    }

    REAL_grDrawTriangle(a, b, c);
}
```

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```
dista = 2 * dista;
distb = 2 * distb;
distc = 2 * distc;

__asm
{
    //Premier point
    pushad
    push ds
    mov esi, a
    mov eax, [esi]
    mov temporaire, eax
    fld temporaire
    fadd dista
    fstp temporaire
    mov eax, temporaire
    mov [esi],eax
    //Deuxieme point
    mov esi,b
    mov eax,[esi]
    mov temporaire,eax
    fld temporaire
    fadd distb
    fstp temporaire
    mov eax,temporaire
    mov [esi],eax
    //Troisieme point
    mov esi,c
    mov eax,[esi]
    mov temporaire,eax
    fld temporaire
    fadd distc
    fstp temporaire
    mov eax,temporaire
    mov [cci],eax
    pop ds
    popad
}
REAL_grSstSelect(1);
REAL_grDrawTriangle(a, b, c);

//Restoration
dista = dista / 2;
distb = distb / 2;
distc = distc / 2;

__asm
{
    //Premier point
    pushad
    push ds
    mov esi, a
    mov eax, [esi]
    mov temporaire, eax
    fld temporaire
    fsub dista
    fstp temporaire
    mov eax, temporaire
    mov [esi],eax
    //Deuxieme point
    mov esi,b
    mov eax,[esi]
    mov temporaire,eax
    fld temporaire
    fsub distb
    fstp temporaire
    mov eax,temporaire
    mov [esi],eax
    //Troisieme point
    mov esi,c
    mov eax,[esi]
    mov temporaire,eax
```

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```
fld temporaire
fsub distc
fstp temporaire
mov eax,temporaire
mov [esi],eax
pop ds
popad
}

REAL_grSstSelect(0);

}
```